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NAVAL FLIGHT OFFICER INSTRUCTOR PIPELINE  
INFLUENCE AND JOB SATISFACTION

T. Nontasak, G. D. Gibb, A. Thomas, and L. S. Goodman



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<p>This report is part of a larger study on student naval flight officer (SNFO) pipeline preference requested by the Commander, Training AirWing SIX. This preliminary report identifies those factors that relate to: (1) a naval flight officer instructor's (NFOI) decision for having entered the naval flight officer (NFO) program, (2) pipeline assignment influence on SNFOs, (3) job satisfaction, and (4) future career concerns.</p> <p>Most NFOIs entered naval aviation because of the desire to fly, to do something challenging, and for excitement and adventure. Though generally satisfied with their assignments, NFOIs preferred their instructing job to their ground job. Although the majority of NFOIs indicated they influenced SNFO pipeline preferences, the reported degree of influence was moderate or little. Demographic and military background variables did not relate significantly to NFOIs' perceived influence on SNFOs. <i>Keywords:</i></p>			
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## SUMMARY PAGE

### THE PROBLEM

This report identifies those factors that relate to: (1) a naval flight officer instructor's (NFOI) decision for having entered the naval flight officer (NFO) program, (2) pipeline assignment influence on student naval flight officers (SNFOs), (3) job satisfaction, and (4) future career concerns.

### FINDINGS

Most NFOIs entered naval aviation because of the desire to fly, to do something challenging, and for excitement and adventure. Though generally satisfied with their assignments, NFOIs preferred their instructing job to their ground job. Although the majority of NFOIs indicated they influenced SNFO pipeline preferences, their reported degree of influence was moderate or little. Demographic and military background variables did not relate significantly to NFOIs' perceived influence on SNFOs.

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## INTRODUCTION

This report is part of a larger study on student naval flight officer (SNFO) pipeline preference (8) requested by the Commander, Training AirWing SIX (6). The report identifies those factors that relate to: (1) a naval flight officer instructor's (NFOI) decision for having entered the naval flight officer (NFO) program, (2) pipeline assignment influence on SNFOs, (3) job satisfaction, and (4) future career concerns.

The requirement for this work stems from the crucial role of NFOs in modern aviation warfare. The increasing complexity of modern technology and naval aircraft has dictated a requirement for well qualified NFOs. An NFO's effective performance, which contributes to mission success, is partially related to job satisfaction (1, 2). A previous study (9) has shown that some NFOs have reservations about their pipeline assignment. In fact, dissatisfaction is the third most influential reason for attrition from the NFO training program (7). Regarding NFO instructors, another study indicates that a sizeable percentage (47%) have reservations about their instructor assignment (5). A negative attitude on the part of instructors could affect SNFOs and adversely impact training effectiveness.

An additional tasking was the examination of the extent to which NFOIs attempted to influence SNFOs in the formation of their pipeline preferences. An analysis of historical data reveals consistent patterns in SNFO preference for various aviation communities (6). In a previous report (8), 77% of SNFOs indicated that NFOIs influenced their preference of pipeline/mission/aircraft. This report documents the extent to which a NFOI's military and demographic background impacts that influence, and assesses the relationship between pipeline assignment and job satisfaction.

## METHOD

**Subjects and Instrument.** To examine NFOIs degree of influence and job satisfaction, a questionnaire was developed and administered to 39 NFOIs stationed at Training Squadrons TEN (VT-10) and EIGHTY-SIX (VT-86) in Naval Air Station Pensacola, Florida. The questionnaire was used to determine the degree of relationship between pipeline assignment and job satisfaction, and the instructors' perceived influence on students' pipeline preference. The questionnaire was based on 18 questions concerning SNFO pipeline preference submitted by Training Air Wing SIX to the Naval Aerospace Medical Research Laboratory (see Appendix A).

The questionnaire was constructed, screened, pre-tested, and revised iteratively. It included 2 sections containing over 300 items. The first section pertained to demographic and military background. The second section specifically addressed factors that influence an individual to enter the NFO program, and the degree of influence of each of those factors. Included in the second section were questions on influence over students pipeline preference, pipeline satisfaction, and the impact of pipeline assignment on future career decisions.

The questionnaire used a variety of item formats including; closed-ended questions with both ordered and unordered response choices, partially closed-ended questions, and open-ended questions. Matrix and contingency

questions (4) were used to minimize questionnaire administration and organization time. The questionnaire incorporated various scaling techniques including Likert and semantic differential formats.

**Procedure.** Data were collected between August 1984 and September 1985. Thirty-nine questionnaires were administered on an individual basis to NFOIs teaching at VT-10 and VT-86. Respondents were briefed on the purpose and anonymity of the questionnaire. Average questionnaire administration time was 45 minutes.

## RESULTS AND DISCUSSION

**Military and Demographic Background.** Of the 39 NFOIs, 46% ( $n = 18$ ) were commissioned from Aviation Officer Candidate School (AOCS), 23% ( $n = 9$ ) entered through the Naval Reserve Officer Training Corp (NROTC), 13% ( $n = 5$ ) graduated from the United States Naval Academy (USNA), and 18% ( $n = 7$ ) were from Officer Candidate School (OCS) and other commissioning sources. Eighty percent ( $n = 31$ ) were lieutenants, and 20% ( $n = 8$ ) were lieutenant commanders. The median length of time since entering VT-10 as students was 6 years. The mean length of time as an instructor was 16.6 months. The majority of NFOIs were white (92.3%), came from urban areas (87.2%), with 89.7% holding bachelor's degrees, and 10.3% holding a master's degree. Twenty-one percent of the respondents were never married, while 75% were presently married. Fifty-nine percent of all respondents had children, with a typical family size of four.

**Reasons for Entering the NFO Program.** A 20-item motivation scale originally developed for NFOs and pilots (2) was used to identify factors that contributed to program participation. Respondents were asked to evaluate each item on a 5-point scale according to its influence on their decision to enter the NFO program. An item analysis indicated that the item with the highest mean score (most influential reason) was 'wanted to fly' ( $M = 4.56$ ,  $SD = .14$ ), followed by 'wanted to do something challenging' ( $M = 3.69$ ,  $SD = .18$ ), and 'adventure' ( $M = 3.60$ ,  $SD = .18$ ). Influential factors contributing to NFO program entry are given in descending rank order in Table 1.

TABLE 1

Reasons Influencing NFO Instructors to Enter the NFO Program

Reason	<u>M</u>	<u>SD</u>
Wanted to fly	4.56	0.85
Wanted to do something challenging	3.69	1.15
For adventure	3.60	1.13
For excitement	3.54	1.10
Not physically qualified (NPQ) for pilot	3.33	1.91
Wanted to be a naval officer	3.08	1.46
Interested in what the Navy does	3.00	1.30
For pay, allowances, and fringe benefits	2.85	1.01
Planned to make the Navy a career	2.85	1.42
Career opportunity better than civilian life	2.74	1.19

**Instructors Perceived Influence on SNFOs Pipeline Preferences.** The majority of the respondents (79%) indicated that VT-10 NFOIs influenced SNFOs preference of pipeline/mission/aircraft. When asked if they personally influenced SNFOs, 60.5% indicated yes. With respect to their perceived degree of influence, 11.1% indicated a 'very strong' influence, 8.3% stated 'strong,' 47.2% indicated 'moderate,' and 33.3% indicated 'very little' influence.

Instructors' commissioning source appeared to be related to a NFOI's influence toward the students' formation of a pipeline preference. The NFOIs commissioned from NROTC were more likely to influence the student than those procured through AOCS (Yates' corrected  $X^2 = 3.24$ ,  $p = .07$ ). Due to the small sample size, meaningful results could not be obtained for NFOIs commissioned from the USNA. Additionally, NFOIs with congruent aircraft preference-assignment were more likely to influence the student than those with unmatched aircraft preference-assignment ( $p = .10$ ). The study's small sample size did not justify an analysis across instructors' rank with respect to influence over student pipeline preference. No significant relationship was found between NFOIs' perceived influence on SNFO pipeline preferences and their age, marital status, number of children, hometown size, length of time since obtaining wings, length of time since instructing, and whether or not instructing was their first assignment following advanced training.

**Job Satisfaction.** A 7-point semantic differential using 10 bipolar adjective pairs relevant to job satisfaction was administered. General concepts such as advancement, enjoyment, and self-esteem were included in the scale, which represented both 'ground job' satisfaction and 'instructing job' satisfaction. Scores on all adjective pairs were summed, and a mean taken as an ordinal measure of attitude toward job satisfaction (Table 2).

TABLE 2  
Means and Standard Deviations of NFOIs Ground Job  
and Instructing Job Satisfaction

<u>Adjective Pair</u>	<u>Instructing Job</u>		<u>Ground Job</u>	
	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>
Boring.....Fascinating	5.50	1.08	5.11	1.31
Miserable.....Enjoyable	5.79	0.99	5.29	1.33
Useless.....Worthwhile	6.26	0.98	5.08	1.12
Monotonous.....Challenging	5.74	1.33	5.05	1.63
Routine.....Creative	5.10	1.18	4.66	1.80
Discouraging.....Hopeful	5.55	0.89	5.03	1.28
Disappointing.....Rewarding	5.84	1.24	5.16	1.24
Frustrating.....Pleasant	5.47	1.20	4.55	1.35
Disparaged.....Respected	5.87	1.07	5.05	1.39
Does not give.....Brings out the me much chance      best in me	5.92	1.05	5.32	1.21
Overall Average	5.71	0.91	5.13	1.06

In general, NFOIs expressed a fairly high degree of job satisfaction across instructing and ground jobs ( $M = 5.41$ ). Furthermore, instructors were consistently more satisfied with the instructing job ( $M = 5.71$ ,  $SD = 0.91$ ) than the ground job ( $M = 5.13$ ,  $SD = 1.06$ ). Specifically, the 'frustrating-pleasant' evaluation of the ground job was rated the lowest ( $M = 4.55$ ,  $SD = 1.35$ ). For the instructing job, the item indicating the least mean evaluation was the 'routine-creative' polarity ( $M = 5.10$ ,  $SD = 1.18$ ). The 'useless-worthwhile' bipolar adjective was rated the highest for both ground and instructing jobs.

Relationships among job satisfaction, perceived degree of influence, and demographic and military background variables are presented in Table 3. Instructing job satisfaction was moderately correlated ( $r = .50$ ) with ground job satisfaction. While length of time as an instructor had no relationship to instructing job satisfaction ( $r = -.09$ ), it showed a weak correlation to perceived degree of influence ( $r = .24$ ), and to ground job satisfaction ( $r = .29$ ). Similarly, an instructor's age had no relationship to perceived degree of influence ( $r = -.03$ ), but it was weakly related to instructing job satisfaction ( $r = .20$ ), and moderately correlated ( $r = .40$ ) with ground job satisfaction.

TABLE 3

Means, Standard Deviations, and Correlation Coefficients Between Job Satisfaction, Degree of Influence, and Background Variables

	Age	Months since obtaining wings	Months since started instructing	Perceived degree of influence	Ground job satisfaction	Instructing job satisfaction	Overall job satisfaction
Age	-						
Months since obtaining wings	0.43**	-					
Months since started instructing	0.39*	0.53**	-				
Perceived degree of influence	-0.03	0.18	0.24	-			
Ground job satisfaction	0.40*	0.18	0.29	0.37*	-		
Instructing job satisfaction	0.20	0.40*	-0.09	0.28	0.50**	-	
Overall job satisfaction	0.36*	0.13	0.13	0.37*	0.89**	0.84**	-
M	31.67	73.90	16.55	1.97	5.13	5.70	5.42
SD	4.03	26.29	9.69	0.94	1.06	0.91	0.85

\* Significant beyond .05 level.

\*\* Significant beyond .01 level.



**NASA's Astronaut Program Interest.** When asked if they intended to use the NFO program as an entry path to NASA's astronaut program, 33.3% ( $n = 13$ ) indicated an interest in the NASA program, while 41% ( $n = 16$ ) reported no such intentions. An additional 15% of the respondents were undecided, while 10% cited physical limitations for not applying to the NASA program.

**Future Career Concerns.** In general, NFOIs were content with their pipeline assignment. They accepted the importance of the needs of the Navy over the desire of the individual. An undesirable future tour would, however, contribute to a decrease in job satisfaction and lead to possible separation. A few (three) NFOIs had enjoyed their instructor tour but indicated they would be leaving for a civilian career. Three respondents were displeased with the Navy's promotion system, particularly department head assignment screening practices. Additionally, two NFOIs were reportedly dissatisfied with an NFO designation instead of careers as pilots.

### CONCLUSIONS

Due to the small sample size, caution must be exercised in interpreting the results. Although NFOIs indicated they influenced SNFO pipeline preferences, the reported degree of influence was moderate or low. This finding lends support to an earlier report (8), which showed that SNFOs rated NFOI influence as moderate. As perceived by SNFOs, the most influential factors contributing to their pipeline preferences, in descending order, were previous contact with the aviation community, Fleet Awareness Brief, Mini-fleet Presentation (8), and NFOI influence.

Job satisfaction was reported to be consistently higher for the 'instructing' job than the 'ground' job. This finding substantiates an earlier finding that NFOIs entered the NFO program for the desire to fly, to do something challenging, and for excitement and adventure. 'Ground' job duties would offer an extremely low probability to fulfill such desires.

High job satisfaction overall should result in effective SNFO training as well as contribute to increased career retention. When compared to pilots, statistics have shown that NFO retention rates are consistently higher (3). It is plausible to assume that higher job satisfaction among NFOs partially contributes to higher retention rates.

## REFERENCES

1. Ambler, R. K., and Lane, N. E. 1972. An advanced pipeline assignment system for Naval Flight Officer Students. Aerospace Psychology Department Technical Memorandum TM72-20, Pensacola, FL: Naval Aerospace Medical Research Laboratory.
2. Ambler, R. K., Rickus, G. M., and Booth, R. F. 1970. Prevention of misassignment among various aviation specialties. Aerospace Medicine 41(1):15-17.
3. Aviator retention statistics. Naval Aviation Officer Community Manager (CDR J. S. Boyd) ltr 130E2/6U374307 of 17 Apr 86. Response to NAMRL (LT G. D. Gibb) ltr 03/0251 of 09 Apr 86.
4. Babbie, E. 1983. The practice of social research. Belmont, CA: Wadsworth.
5. Bowers, N. D. 1954. Opinions of officers regarding assignment to training command. NASM-378, Pensacola, FL: Naval School of Aviation Medicine.
6. Commander Training Air Wing SIX ltr of 16 Jul 84. Subj: Student Naval Flight Officer (SNFO) Aviation Community Preference.
7. Gregoire, H. G. 1976. Analysis of reasons for Drop on Request (DOR) attributes from May to October, 1975. Aerospace Psychology Department Technical Memorandum TM76-8, Pensacola, FL: Naval Aerospace Medical Research Laboratory.
8. Nontasak, T., Goodman, L. S., Thomas, A., and Gibb, G. D. 1986. Factors influencing student naval flight officer pipeline preference. NAMRL 1321. Pensacola, FL: Naval Aerospace Medical Research Laboratory.
9. Waag, W. L., and Shannon, R. H. 1973. A factor analytic study of attritions from naval aviation training. NAMRL-1181, Pensacola, FL: Naval Aerospace Medical Research Laboratory.

## APPENDIX A

### SELECTION PREFERENCE QUESTIONS (As provided by Training Air Wing SIX)

01. What was your commissioning source?
02. What influenced you to become a NFO?
03. What was your initial aircraft preference?
04. What or who influenced your initial preference?
05. From what aviation community was the first contact you had with a Naval Aviator?
06. Did Fleet Awareness Briefs affect your preference?
07. How did staff instructors affect your preference?
08. Did your aircraft preference change? If so, why?
09. Did you prefer an aircraft carrier or a shore-based fleet squadron?  
Why?
10. Did you prefer to be homeported in CONUS or overseas for your first fleet squadron tour?
11. What effect did marriage have on your aircraft preference?
12. Does or did getting your choice of aircraft hold equal importance to getting your wings?
13. Do you intend to use the NFO program as an entry path to NASA's astronaut program?
14. How long have you been in the NFO program?
15. What aircraft/pipeline have you been selected for? What choice was this?
16. Were you happy with your selection, when selected?
17. Are you happy now with your pipeline?
18. How has your selection affected your future career plans?